



GREENBELT STRUCTURAL SERVICES
A DIVISION OF TAHI LLC

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Part 1: General Building and Property Information

Foreword

This document has been provided by TAHI Inspections and Greenbelt Structural Services to aid in the proper understanding, maintenance, and service needs of your home.

Routine monitoring and maintenance of your home and building systems is integral in proper operations, maximization of energy efficiency, and component longevity. Failure to properly maintain and service your home and systems could result in elevated issues, failures, reduced life expectancy, and voiding of warranties (builder and/or manufacturer protection where applicable).

The focus of your property maintenance program should be on preventive measures. The property and building systems should be inspected and maintained according to the following schedules or manufacturer recommendations. Copies of this maintenance schedule should be made available to grounds, household, and general service staff (where applicable).

This systems manual is designed to inform the homeowner, occupants, and/or service specialists on operation and maintenance needs of the building's mechanical and structural systems. It is intended to be useful in the day-to-day and long term operations of the property. This document includes a summary of recommended maintenance procedures/practices that should be followed to extend the life of the installed products.

The systems manual is meant to be a living document. As future changes are made to the systems, the information relative to the new equipment should be documented here. Subsequently, discarded equipment should be removed from the manual as it is removed from the building.

Part 2: Mechanical Systems Information & Maintenance

HVAC Condensing Units

Unit Type	Mfg.	Model	R22/R410A	Mfg. Date	Ton
Condenser #1					
Air Handler #1					
Condenser #2					
Air Handler #2					
Condenser #3					
Air Handler #3					
Condenser #4					
Air Handler #4					
Condenser #5					
Air Handler #5					

HVAC Heating Units

Unit Type	Mfg.	Model	Fuel Type	Mfg. Date
Furnace #1				
Furnace #2				
Furnace #3				
Furnace #4				
Furnace #5				

HVAC Thermostat Locations

T-Stat/Zone #	T-Stat Location	Zones Area	Notes
1			
2			
3			
4			

HVAC System Condenser Maintenance Chart

Maintenance Recommendations	Daily	Week	Month	Quarter	Bi-Annual	Year	Other
Clean Debris Around Unit			✓				As Needed
Inspect for Lines for Damage				✓			
Inspect Suction Line Insulation				✓			
Inspect/Record Suction Line Temp					✓		
Check Unit for Even/Level Pad					✓		
Visually Assess Electrical/Capacitor					✓		
Service/Clean Coils						✓	As Needed
Maintenance Servicing						✓	
Register System With Manufacturer							Within 60 Days of Taking Ownership

HVAC System Air Handler and Furnace Maintenance Chart

Maintenance Recommendations	Daily	Week	Month	Quarter	Bi-Annual	Year	Other
Filter Change			✓				
Flush Condensate Drain (Drain Cleaner)			✓				
Inspect for Moisture issues			✓				
Test/Record Supply Temp				✓			
Test/Record Return Temp				✓			
Service/Clean Coils						✓	
Professionally Clear Condensate Drain						✓	

Maintenance Recommendations	Daily	Week	Month	Quarter	Bi-Annual	Year	Other
Engage/Inspect Flame					✓		
Visually Inspect Gas Line					✓		
Inspect Unit for Physical Damage						✓	
General Servicing						✓	
Register System With Manufacturer							Within 60 Days of Taking Ownership

Electrical (Main Service Panels and Disconnects)

Panel #	Panel Location	Panel/Breaker Type	Service Amperage	Notes
1				
2				
3				

Electrical (Sub Panels)

Panel #	Panel Location	Panel/Breaker Type	Service Amperage	Notes

Electrical (Fire/Smoke Alarm System)

Location	# Detectors	# Strobe Alarms	# Alarm Pulls	Notes
Room #1				
Room #2				
Room #3				
Room #4				
Room #5				
Room #6				
Room #7				
Control Panel at Main Entry				

Panels and Disconnects Maintenance Chart

Maintenance Recommendations	Daily	Week	Month	Quarter	Bi-Annual	Year	Other
Visually Inspect for Physical Damage					✓		
Visually Inspect for Heat Damage					✓		
Remove Cover Plate to Visually Inspect (Pro Only)						✓	As Needed
Trim Shrubs/ Branches (18" Clearance)						✓	Check Yearly, Trim As Needed
General Servicing							As Needed

Devices and Fixtures Maintenance Chart

Maintenance Recommendations	Daily	Week	Month	Quarter	Bi-Annual	Year	Other
Visually Inspect for Physical Damage					✓		
Visually Inspect for Heat Damage					✓		
Functionality Test				✓			
Replace Bulbs							As Needed
Clean Debris from Fixtures/Globes				✓			As Needed
Caulk and Seal at Fixture/Wall Connections							5-7 Tears or as Needed

Smoke/Gas Alarms and Devices Maintenance Chart

Maintenance Recommendations	Daily	Week	Month	Quarter	Bi-Annual	Year	Other
Functionality Test			✓				Or Per Mfg. Recommendation
Change Alarm Battery						✓	Or As Needed (if Sooner)
Dust/Clean Devices				✓			Or As Needed

Plumbing Systems Maintenance Chart

Maintenance Recommendations	Daily	Week	Month	Quarter	Bi-Annual	Year	Other
Visually Assess Areas Near Equipment/Pipes			✓				
Turn/Test All Fixture Valves				✓			
Clear/Add Cleaner to Drain Lines				✓			
Service/Flush Water Heater						✓	

Irrigation System Maintenance Chart

Maintenance Recommendations	Daily	Week	Month	Quarter	Bi-Annual	Year	Other
Functionality Test (Zone by Zone)					✓		Test Quarterly if System Not in Regular Use
Check Sprinkler Heads for Damage					✓		
Check for Overgrowth					✓		
Professional Servicing							Every 2 Years or as Needed

Part 3: Building Maintenance Schedule

Monthly Maintenance Schedules

Monthly Maintenance	Description
Your Home at a Glance	Each month, take a few moments to walk the exterior and interior portions of your home. Make it a point to view areas of the building that you may not notice on a regular basis. Take note of items that appear out of place. Uncommon staining, cracks, gaps, moisture pooling, etc. should be recorded and filed for further assessment during upcoming service calls. Any elevated concerns should be addressed as soon as possible.
Representative Sampling	Each month, make it a point to perform a few 'representative sample' tests. These tests can be done at any time and incorporated into your typical routine. Simply choose a feature of the home and briefly check for proper condition and functionality. Opening and closing windows, running a sink fixture and checking for leaks, glancing behind the washer/dryer are all examples of simple spot checks which can assist in the early detection of maintenance needs.
Adjust Maintenance Time Intervals Based on Individual Usage/Needs	Adjusting time intervals of regular maintenance may be required based on the specific factors and routines of individuals occupying the home. As an example, if the occupants seldom use the oven and stovetop, extending scheduled cleaning of range filters to quarterly intervals instead of monthly would likely provide sufficient maintenance. Alternatively, if indoor pets reside in the home, increasing intervals of HVAC filter replacements may be needed. Consulting with your building inspection specialist may aid in determining what maintenance adjustments are warranted.
Roof, Attic, and Crawlspace Assessments	The roof system, attic, and crawlspace (foundation area) are critical building components. Reoccurring maintenance checks will be required. Ground level roof assessments should take place monthly. Brief visual assessments of safely accessible attics and crawlspaces should be conducted quarterly and following any inclement weather conditions.
Gutters and Drainage System	Various drainage features have been installed to assist in attaining sufficient moisture diversion away from the structure. Areas surrounding the structure and all drainage features should be monitored regularly (particularly after heavy rains). Monitoring and maintenance of drainage features should be considered an ongoing requirement. Clearing of tree, soil, and other debris will be required (maintenance interval needs will vary). Visual checks for blockage, leakage, and areas of marginal moisture diversion should take place on no less than a monthly basis.

Monthly Maintenance (Cont.)	Description
Smoke/CO Detectors	Perform functionality test (test button)
Fire Extinguishers	Check tank gauge for proper charge
Change HVAC Filters	Filter sizes listed above in 'Mechanical System Information'
Clean/Clear HVAC Condensate Drain Line	Pour appx. 1/2-1 cup of bleach into drain line port located at the indoor unit (vertical PVC pipe)
A/C: Record Supply and Return Temperatures	If a thermometer is available, record temperatures at an air vent near the indoor unit (while A/C is running). Next, record indoor temperatures (noted on the thermostat or taken at a return vent). If the temperature difference between supply and return temps are not within the range of 14-25 °F, servicing may be required.
Record and Save HVAC System Notes	Minor system issues and concerns (comfort issues, hot/cold areas, odors) should be noted and provided to your HVAC system specialist during the bi-yearly professional servicing. If elevated concerns or functionality failure occurs, a service specialist should be contacted immediately
A/C: Check Line for 'Beer Can Cold' (As Needed Only)	During hotter seasons while A/C is running, find the refrigerant line running from the outdoor unit towards the home (lager of 2 copper pipes - usually covered with insulation). Pull back the insulation and grab the copper pipe. On a hot day, the pipe should be wet and cold to the touch (like a beer can pulled from a cooler). If the line is not wet/cold, servicing may be required.
Clear Sink/Tub/Shower Drains and Assess for Issues	Flush drains with water/bleach mixture or a standard drain cleanser (Hair and Grease ®). This is also a good time of check around plumbing items for indicators of leaks/moisture issues
Check Sink Drains/ Commodes for Signs of Moisture or Leakage	Visually assess areas near plumbing pipes
Flush Unused Commodes and Drains	Flush commodes and run water though drains that are not used regularly (unused drain traps dry and may allow plumbing gases/odors into the home)
Clean Dryer Lint Trap	If dryer is operated often, lint trap cleaning should occur weekly
Clean/Replace Range Hood Filter	Hand wash or dishwasher. Dry and replace
Clean Dishwasher	Place 1 cup of white vinegar in upper rack of empty dishwasher and run a hot water cycle (eliminates grease/odors)
Clean Garbage Disposal	Grind ice cubes while running cold water (cleans blades and reduces odors)

Bi-Yearly Maintenance Schedules

Bi-Yearly Maintenance	Description
Perform All Monthly Maintenance Tasks	See info above
Check Crawlspace	From easily accessible areas, inspect the crawlspace for indicators of moisture entry, vermin activity, excess humidity, signs of mildew/mold, unusual odors, damage, and leaks.
Inspect Roof - Ground Level	Visually inspect the roof from ground level and windows looking for signs of damage, moisture issues, excess tree debris
Inspect Tree Branches Near Roof/ Structure	Trim back limbs which may be close enough to make contact with the roof/structure.
Check Attic Spaces	Check accessible attic spaces for evidence of moisture penetration, vermin activity, damage to framing, issues near mechanical equipment, disruption of insulation.
Inspect Exterior/Interior Walls	Walk the interior of the building looking for cracks, damage, moisture staining, insects, and general concerns - note and address issues.
Inspect/Clean Gutters and Scuppers	A specialist may be required to perform this work (ladder needed/increased hazards present)
Visually Assess Decks and Fences	Check decks, fences, and exterior features for damage, loose fasteners, wood/ground contact, insect activity, etc.
Check Garage Doors and Automatic Gates	Visually assess garage doors and gates, test operators for proper functionality
Operate/Clean Windows	Operate all windows. Clean and service as needed.
Check Electric Panels	Do not remove breaker cover plate, open panel cover and visually assess panel and breakers for evidence of tripped circuits, overheating, general damage
Spot Test Outlets GFCI Devices	Randomly select various outlets and GFCI devices. Ensure functionality and reset devices as needed
Bi-Yearly HVAC System Servicing	Schedule your bi-yearly HVAC servicing (pre-winter, pre-summer)
Test Plumbing Fixtures and Drains	Run plumbing fixtures and observe drainage/drain pipes (where visible). Ensure no leakage or slow/blocked drains are present.
Clean Ice Makers	Manufacturer cleaning procedures provided in separate document.
Check Behind/Under Dishwasher	View around/under dishwasher to ensure no indicators of leaks or issues are present.
Run Sprinkler System	Run/inspect all zones for damage/leakage/issues.

Yearly Maintenance Schedules (General)

Yearly Maintenance - General	Description
Perform All Monthly/6-Month Maintenance Tasks	See info above
Contact Home Inspector: 1-Year Inspection	See info below
Contact Maintenance Pros: Yearly Service Needs and to Address Items Discovered During Inspection Process	If a yearly professional inspection and maintenance servicing occurs, the proceeding recommendations are not required to be performed by the home owner.
*If Inspection/Service Professionals are Not Scheduled	<p>Homeowners who choose not to schedule professionals for a yearly inspection, maintenance check, and servicing should proceed to the checklist provided below. Homeowners should <u>NOT</u> perform any hazardous testing or servicing. Failure to perform recommended professional servicing may reduce system quality and affect warranty protection.</p> <p>YEARLY PROFESSIONAL INSPECTION AND SERVICING IS STRONGLY ADVISED.</p>

Yearly Maintenance Schedules (Structural)

Yearly Maintenance - Structural	Description
Perform All Monthly/6-Month Maintenance Tasks	See info above
Exterior Wall and Foundation and Assessment	Walk the full perimeter of the building (where accessible and free of hazards) looking for cracks, damage, moisture staining, insects, and general concerns - note and address issues
Crawlspace Assessment	If possible and no elevated hazards are present, enter the crawlspace (with flashlight), inspect the crawlspace for indicators of moisture entry, vermin activity, excess humidity, signs of mildew/mold, unusual odors, damage to framing, indicators of leaks coming from upper upper levels (at crawlspace ceiling) *Contacting a professional is advised
Grading and Drainage Assessment	The home owner should note any areas of concern observed during and directly following heavy rain conditions. Any areas of marginal drainage/pooling water should be further investigated by a system specialist.
Inspect Trees	Check trees for signs of growth issues/damage, ensure branches nearing contact with the building are trimmed
Roofing Assessment	A roof level inspection should take place (ground level assessment if not performed by a professional)
Attic Assessment	Check accessible attic spaces for evidence of moisture penetration, vermin activity, damage to framing, issues near mechanical equipment, disruption of insulation.
Operate/Service Doors	Open/close all doors, check for functionality issues, loose/missing hardware, hinge squeaking, drafting, shifting (doors un-plumb, sticking, ghosting) - update as needed
Assess/Service Garage Doors and Operators	Visually assess and test door operations and safety features. Oil/lube track and operator features as needed.
Operate/Service Windows	Open/close all windows, check for functionality issues, loose/missing hardware, drafting, damage, screen issues - service and clean as needed
Inspect Interior Walls, Ceilings, Floors, and Storage	Inspect interior portions of the home for evidence of damage, gaps, moisture staining, mold/mildew, insect activity.

Yearly Maintenance - Structural (Cont.)	Description
Inspect Stairwells/Railing	Assess stairwells and railing to ensure all material and safety features remain secure and in good condition
Fireplace and Chimneys	Visually assess accessible areas. Test flue damper, engage gas valve, verify proper exit of smoke from chimney stack. *Professionals should assess rooftop and accessible attic portions of the fireplace and chimney.
Porches, Decks and Exterior Features	All exterior features of the home should be assessed for physical damage, wood/soil contact, loosening fasteners/material, framing issues, insect activity, proper railing protection *Professionals should investigate proper load support

Yearly Maintenance Schedules (Electrical)

Yearly Maintenance - Electrical and Fire Safety	Description
Perform All Monthly/6-Month Maintenance Tasks	See info above
Full Panel Assessment (Professional Assessment)	Remove panel cover plates and visually assess breakers, wires, bus bars, etc. for evidence of issues, damage, NEC violations *Licensed professional - see safety advisory above
AMP Load Testing (Professional Assessment)	Testing of load demands should be conducted by a skilled professional
Wiring/Voltage Testing (Professional Assessment)	Testing of all common outlets for functionality and wiring issues should take place. Voltage testing at appliance outlets (240V) should be conducted where available.
Distribution Wiring Checks	At safely accessible areas where distribution wiring is visible (attics/crawlspaces), wiring should be visually inspected for damage, exposed splices, evidence of heat issues.
Fixture Testing	Visually assess and operate all fixtures (lights/fans). Address any issues as needed
Smoke Alarms and Fire Suppression Systems	In conjunction with monthly/6-month testing, all alarm batteries should be replaced. Visually assess fire suppression controls. Ensure any jurisdictional (city) inspection requirements are not due.

Yearly Maintenance Schedules (HVAC)

Yearly Maintenance - HVAC	Description
Perform All Monthly/6-Month Maintenance Tasks	See info above
Contact HVAC Service Specialist	Schedule bi-yearly servicing. Yearly A/C servicing should include, but not be limited to: Sub-cool/Superheat test, leak testing, clearing of condensate drain line, cleaning of evaporator coils, cleaning of condenser coil fins, leveling of condensing unit, replacement of damage refrigerant line insulation, electrical check of CPU, contractor, compressor, capacitors, and wiring.
Provide Homeowner Notes to HVAC Service Specialist	Homeowners and occupants of the building should take notes of any issues or concerns that arise during the year. These notes can assist your service specialist in troubleshooting and addressing any system issues. Examples of info which could be helpful include, but is not limited to: comfort issues, uncommon odors, rises in utility costs, etc.
Perform Duct Leakage Checks/ Testing	Visual assessment and equipment testing (for professionals) of the HVAC ducts and vents should take place to determine if damage, air loss, energy loss, or areas of condensation issues/ mildew growth are present. All duct issues should be addressed and the system cleaned as needed. NOTE: Additional equipment testing by servicing professionals may aid in determining balance and airflow issues.

Yearly Maintenance Schedules (Plumbing)

Yearly Maintenance - Plumbing	Description
Perform All Monthly/6-Month Maintenance Tasks	See info above
Contact Plumber to Service Water Heaters and System	Yearly serving and flushing of water heater tanks should take place to reduce sediment build up, pipe corrosion, and plumbing odors.
TPR Valve Check	The TPR valve located at water tanks should be visually assessed and tested for proper functionality *Visually assess only if performed by a homeowner
Pressure Check	Testing of the incoming water pressure should take place to ensure pressure levels remain within normal range (40-80 PSI). NOTE: A standard pressure gauge can be purchased at most hardware stores.
Test All Fixture Shut Off Valves	Fully open and close all supply shut off valves at sinks, commodes, water heaters, laundry areas, etc.. Occasional operation of these valves will reduce the likelihood of corrosion buildup and eventually seizure/failure. Any discovered leakage or damaged valves should be replaced.
Owner Plumbing Supply Shut Off	The main water supply valve should be checked and tested to ensure the valve is functional and can be turned into the fully closed position using normal hand pressure. While in the closed position, exterior hose bib should be opened to ensure the shut off valve is properly functional (water flow completely ceases after lines are drained)
Plumbing Drain Test	Flush all commodes, run all showers, fill all tubs sinks to overflow port and drain. Assess areas around plumbing and at ceilings below upper level plumbing for evidence of leaks/ moisture staining NOTE: Inspection professional carry moisture testing equipment which will increase the ability to test for leakage
Open/Assess Drainage Pipe at Clean Out	With a crescent wrench, remove the clean out access cap (4" vertical pipe typically located at side or front yard). With a flash light, view the buried sewage line (from the open access port) to ensure no standing water or debris build up is present. With water running/draining (at a tub or sink), observe the flow of water in the pipe. Water should be quickly flowing though the pipe. If draining water is rising/blocked, a plumber should be contacted.
Clean Sink and Bath Fixture Screens	Unscrew/remove sink and shower fixture head/screens and soak in a light solvent or vinegar for 15 minutes. Replace and test for issues. NOTE: For fixture assemblies that can not be easily removed, place vinegar in plastic bag. Submerge fixture head in vinegar solvent and secure bag with a rubber band. Allow to clean for 15-20 minutes.

Yearly Maintenance Schedules (Irrigation)

Yearly Maintenance - Irrigation	Description
Zone by Zone Sprinkler System Assessment	Set the sprinkler system to 'Manual' and assess each zone to determine if the system is functioning as intended. System checks should include, but are not limited to: sprinkler head damage, leaks, low pressure, and zone failure

Yearly Maintenance Schedules (Pool/Spa)

Maintenance - Pool/Spa (For Future Installations)	Description
Weekly Servicing Recommended	Pool and spa structures, equipment, and water require a high degree of regular servicing. Best practices call for weekly, professional, servicing and cleaning. NOTE: If weekly, professional servicing does not take place, more detailed maintenance info should be researched. Additional details can be viewed at: theaustinhomesinspector.com/pool-spa411
File Weekly Service Records by Year	Ensure all weekly service and repair documents are filed by year.
Provide Homeowner Notes to Pool/Spa Service Specialist	Homeowners and occupants of the building should take notes of any issues or concerns that arise during the year. These notes can assist your service specialist in troubleshooting and addressing any system issues.
Visually Assess Pool/Spa Structure and Equipment	Regular visual assessment of the pool and spa equipment, structure, and water condition should take place (no less than weekly). Issues and concerns should be noted and provided to your service specialist
Operate All Equipment/Features Regularly	Ensure all equipment and features are ran regularly (especially during off-seasons). Systems which are not engaged for extended amounts of time is a common cause of damage/ functionality issues.

Part 4: Additional Resources - Web Links

Additional Maintenance Resources and Calendars (Web Links)

Maintenance and Client Info.....atxinspect.com/client-care
Upload-able Maintenance Calendars.....atxinspect.com/maintenance411
Additional Maintenance Resources.....atxinspect.com/maintenance411
Additional Pool/Spa Maintenance Resources...atxinspect.com/pool-spa411

Local Referral Information (Contractors and Trade Specialists)

Referral List and Information.....atxinspect.com/referral-info